

Appl. No. : 10/792,145
Filed : March 3, 2004

REMARKS

For the reasons discussed during the interview and explained below, Applicants respectfully submit that the rejections of 1-21 are improper.

I. Rejections based on four Mercury Interactive Patent References

In the Office Action, the Examiner rejected Claims 1-21 based on four Mercury Interactive patent references. Specifically, the Examiner rejected Claims 1-21:

- on provisional obviousness-type double patenting grounds over Appl. No. 10/057,295;
- on provisional obviousness-type double patenting grounds over Appl. No. 10/038,098;
- on obviousness-type double patenting grounds over U.S. Pat. 6,738,933; and
- on anticipation grounds over U.S. Pub. 2002/0198985.

Because these four Mercury Interactive patent references share a common specification (i.e., the technical disclosures of the specifications are substantially identical), Applicants will address these four bases for rejection together.

As discussed during the telephone interview, the common specification of the four Mercury Interactive references discloses a monitoring system that includes various features for monitoring a transactional server. In contrast to the system described in the present application, these features do not make use of a probe that runs on an application server and measures the execution times of individual application components invoked as part of a transaction. See Claims 1 and 11 of the present application, discussed below. To assist the Examiner in better understanding this and other distinctions, three particular features described in the common specification are summarized below.

Transaction Breakdown Feature

One feature described in the common specification is a “transaction breakdown” feature. This feature is illustrated in Figures 23-25, and is described in section VIII-A (“Transaction Breakdown”). As discussed during the interview, the transaction breakdown feature enables a user of the monitoring system (e.g., a system administrator) to view a graphical breakdown which reveals how much of the total transaction time is attributable to, e.g., DNS resolution, connection

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establishment, server time, network time, and client time. See Figures 23 and 24. Such a transaction breakdown report may, for example, reveal that a particular type of transaction has a longer than expected average transaction time, and that the delay is primarily attributable to the transactional server (as opposed, e.g., to the network).

While this information may be helpful, it typically would not be sufficient for determining why the transactional server is performing poorly. For example, if multiple application components are invoked on an application server as part of this transaction, the transaction breakdown report would not reveal the execution times of these individual application components; thus, the administrator could not readily determine, e.g., whether a particular one of these application components is the main source of the delay.

One of the four Mercury Interactive references, Appl. No. 10/038,098, includes claims that are directed to aspects of the transaction breakdown feature, and the Examiner relied on these claims to formulate a provisional obviousness-type double patenting rejection. The '098 application was allowed on January 4, 2007 with an Examiner's Amendment to the claims.

Server Resource Monitoring Feature

The common specification also discloses a “server resource monitoring” feature. This feature is illustrated in Figures 26-30 and is described in section VIII-B (“Server Resource Monitoring”).

As discussed during the interview, the server resource monitoring feature enables an administrator to assess whether performance problems have a correlation with particular server resource parameters. For example, using the graph shown in Figure 30, an administrator may identify that a correlation exists between transaction response times and the server resource parameter “server memory capacity.” This information is useful for pinpointing certain types of problems such as those involving server resource deficiencies.

As with the transaction breakdown feature, the server resource monitoring feature does not reveal the execution times of individual application components invoked as part of a transaction. Thus, for example, a problem resulting from a poorly written application component may not be readily identifiable using the server resource monitoring feature.

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Root Cause Analysis Feature

The common specification also discloses a Root Cause Analysis (RCA) feature. The RCA feature is illustrated in Figures 32-37 and is described in section VIII-D.

As discussed during the interview, the Root Cause Analysis feature automatically detects correlations between particular performance parameters. For example, the RCA system may automatically detect that the transactional server is experiencing longer than usual response times, and that this performance problem is correlated with a particular server resource parameter, such as disk space. As with the transaction breakdown and server resource monitoring features discussed above, the RCA feature does not reveal the execution times of individual application components that are invoked as part of a transaction.

Aspects of the Root Cause Analysis feature are claimed in two of the Mercury Interactive references, U.S. Pat. 6,738,933 and U.S. Appl. No. 10/057,295 (currently on appeal). The Examiner relied on these claims to formulate obviousness-type double patenting rejections.

Discussion

In view of the foregoing, Applicants submit that the common specification does not disclose at least the bolded limitations shown below in independent Claims 1 and 11:

1. A system for analyzing the operation of a web site system that comprises an application server, the system comprising:
 - an agent computer configured to access the web site system as a emulated user thereof to execute a transaction that invokes the application server;
 - a probe that runs on the application server and monitors the application server during execution of the transaction, **wherein the probe generates and reports data indicative of execution times of each of a plurality of application components executed by the application server as part of the transaction;** and
 - a reports server that receives said data indicative of the execution times of each of the plurality of application components, and **provides a breakdown indicating an amount of time spent by each of the plurality of application components executing the transaction.**

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11. A method for analyzing the operation of a web site system that comprises an application server, the method comprising:

during execution of a user transaction that invokes an application on the application server, **monitoring execution of the application with a probe that runs on the application server to measure execution times associated with each of a plurality of application components invoked by the user transaction, to thereby generate a set of transaction-specific time measurements**; and

incorporating the set of transaction-specific time measurements into a report that provides a transaction-specific breakdown of times spent by each of the plurality of application components during processing by the application server of the user transaction.

Applicants also respectfully submit that the common specification does not disclose the feature described in the limitations bolded below in independent Claim 19:

19. A system for monitoring application server performance of a deployed web site, the system comprising:

a probe that runs on an application server of the web site, wherein the probe includes functionality for selectively monitoring the execution of transactions by the application server to collect application server performance data; and

an agent component that runs on a host computer that resides externally to the deployed web site, wherein the agent component is configured to initiate execution of transactions by sending transaction requests to the web site;

wherein the agent component specifies that a transaction is to be monitored by the probe by including encoded information within a corresponding transaction request sent to the web site, and wherein the probe is responsive to the encoded information by monitoring execution of the transaction to generate application server performance data for the transaction.

As discussed during the interview, the portions of the common specification cited in the Office Action (including Figs. 1, 17, 20 and 25) simply do not disclose this feature.

Because the bolded limitations of Claims 1, 11 and 19 are not disclosed by the common specification, they cannot validly be included in the claims of Appl. Nos. 10/057,295 and 10/038,098 and Patent No. 6,738,933. Indeed, these limitations do not appear in the claims of

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any of these three references. Consequently, the provisional and non-provisional obviousness-type double patenting rejections of Claims 1-21 over these three references are improper.

Further, because the bolded limitations are not disclosed in the common specification, the anticipation rejection over U.S. Pub. 2002/0198985 is improper.

For the foregoing reasons, Applicants respectfully submit that the rejections over the four Mercury Interactive patent references are improper, and request that these rejections be withdrawn.

As discussed during the telephone interview, the dependent claims recite additional distinctions over the four Mercury Interactive references. For instance, the Mercury Interactive references do not disclose or claim a probe that “includes a code instrumentation component that dynamically instruments the application components at load time” as recited in Claim 4. As another example, the Mercury Interactive references do not disclose or claim a user interface “that displays a listing of application components installed on the application server, and provides functionality for an operator to select specific application components from the listing to instrument for monitoring,” as recited in Claim 6.

II. Anticipation Rejection over Forman

Claims 1-21 also stand rejected as anticipated by U.S. Pat. 6,178,449 to Forman. Applicants respectfully submit that this rejection is improper because Forman does not disclose the limitations of any independent claim. Each independent claim is discussed below.

Independent Claim 1

Regarding Claim 1, Applicants respectfully submit that the anticipation rejection is improper because Forman does not disclose the following: “wherein the probe generates and reports data indicative of execution times of each of a plurality of application components executed by the application server as part of the transaction.”

In connection with this claim language, the Examiner cites the abstract; Figs. 3, 4, 6 and 7; and col. 5, lines 23-52 of Forman. Nothing in these or any other portion of Forman, however, discloses a probe or any other component that “generates and reports data indicative of execution times of each of a plurality of application components executed by the application server as part of the transaction.” In this regard, the response times measured in Forman are apparently overall transaction response times seen by end users, and not “execution times of each of a plurality of

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application components executed ... as part of the transaction.” See Forman at col. 4, lines 44-46. Indeed, Forman does not disclose that a plurality of application components are executed as part of a transaction, let alone that the execution times of such application components are monitored.

The rejection of Claim 1 is also improper because Forman does not disclose a reports server that “provides a breakdown indicating an amount of time spent by each of the plurality of application components executing the transaction.” To the contrary, Forman’s system appears to report the overall response time of a transaction without regard to how much time may have been spent by each of a plurality of application components. As discussed during the interview, the notations C1, C2 ... C5 in Figure 6 of Forman do not represent execution times of individual application components. Rather, these notations represent response time thresholds that are used to maintain statistical data (count values) regarding response time measurements. See Forman at col. 8, last paragraph.

Because Forman does not disclose all of the limitations of Claim 1, the rejection of Claim 1 is improper.

Independent Claim 11

Regarding Claim 11, Applicants respectfully submit that the anticipation rejection is improper because Forman does not disclose “monitoring execution of the application with a probe that runs on the application server to measure execution times associated with each of a plurality of application components invoked by the user transaction, to thereby generate a set of transaction-specific time measurements.” As discussed above, nowhere does Forman disclose that a plurality of application components are invoked by a transaction, let alone the measuring of execution times associated with each such application component. In this regard, the response time measurements in Forman are apparently overall transaction response times seen by end users.

The rejection of Claim 11 is also improper because Forman does not disclose “incorporating the set of transaction-specific time measurements into a report that provides a transaction-specific breakdown of times spent by each of the plurality of application components during processing by the application server of the user transaction.” The notations C1, C2 ... C5

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do not represent such a breakdown. Indeed, Forman's system apparently would not be capable of providing a transaction-specific breakdown of the type described in the claim.

Because Forman does not disclose all of the limitations of Claim 11, the rejection of Claim 11 is improper.

Independent Claim 19

Regarding Claim 19, Applicants respectfully submit that the anticipation rejection is improper because Forman does not disclose an agent component and probe that function as follows: "the agent component specifies that a transaction is to be monitored by the probe by including encoded information within a corresponding transaction request sent to the web site, and wherein the probe is responsive to the encoded information by monitoring execution of the transaction to generate application server performance data for the transaction." As discussed during the telephone interview, the transaction time agent 460 and transaction time manager 422 of Forman do not operate in this manner.

Dependent Claims

The anticipation rejections of the dependent claims over Forman are improper in view of their respective dependencies from independent Claims 1, 11 and 19. In addition, at least some of the dependent claims add limitations that are not disclosed by Forman. For example, Forman does not disclose a probe that "includes a code instrumentation component that dynamically instruments the application components at load time" as recited in Claim 4. As another example, Forman does not disclose or claim "a user interface that displays a listing of application components installed on the application server, and provides functionality for an operator to select specific application components from the listing to instrument for monitoring," as recited in Claim 6.

III. Conclusion

In view of the foregoing, Applicants respectfully submit that the rejections of Claims 1-21 are improper, and request that these rejections be withdrawn.

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If any issues remain which can potentially be resolved by telephone, the Examiner is invited to call the undersigned attorney of record at his direct dial number of 949-721-2950.

Respectfully submitted,

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